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PROVISIONAL INTELLIGENCE REPORT

STRUCTURAL ANALYSIS OF THE FIVE YEAR PLAN FOR THE
EAST GERMAN CHEMICAL INDUSTRY
1951-55

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CIA/RR PR-45

(ORR Project 22.21)

15 January 1954

NOTICE

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FOREWORD

This report is designed to assist in the exploitation of data found in the various drafts of the Five Year Plan of East Germany. A deliberate effort has been made to avoid unnecessary repetition of detailed data available in the basic documents. In an effort to simplify exploitation of the information, much use has been made of index numbers so that comparisons of movement and of relative size may be made.

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STRUCTURAL ANALYSIS OF THE FIVE YEAR PLAN FOR THE
EAST GERMAN CHEMICAL INDUSTRY
1951-55*

Summary

On 1 November 1951, East Germany adopted a Five Year Plan for the years 1951-55. This Plan placed emphasis upon a rapid expansion of the chemical industry, especially in those items classified as "basic chemicals."

This emphasis was designed to increase East German self-sufficiency by lessening dependence on chemical imports and by providing chemical substitutes for imported materials as far as possible. To achieve these goals, a capital expansion program was scheduled with basic capacity to be reached by the end of 1954. By 1955, chemical imports were to be only 2.8 percent of total availability of chemical products, as compared with 4.1 percent in 1951.

Despite the scope of the projected increases in production,** increases in industrial demand for chemical products were seen as keeping pace. As a result, little increase in inventories was foreseen. Some general increase in the level of the operative reserves was scheduled, but this appears to have been a recognition of the need for some flexibility in the anticipated allocation of commodities.

The Plan seems to mask information on the actual extent of inventories, reparations, government orders, and stockpiling. This reduces its value as an indicator of intentions.

On the whole, however, the Five Year Plan appears to contain little margin of productive capacity that would facilitate a sizable mobilization effort in the chemical industry. On the contrary, it anticipates a growing industrial demand for chemical products in East Germany and in the Soviet Bloc, and this demand seemingly would press upon domestic production to an extent that would make stockpiling difficult. The pressure could be relieved, however, by a maintenance of a relatively high level of importation of the commodities required by the chemical industry, by a reduction in domestic demand, by increases in scheduled production, or by a general reduction in exports.

* This report contains information available as of 1 August 1953.

** Assuming that the 1951 Plan was met, production of the chemical industry was to rise 83 percent in the 4 years through 1955.

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I. Introduction.

In East Germany,* the Five Year Plan of the national economy is the basic document for long-term planning in the chemical industry. An examination of its targets reveals long-range goals as set in 1950 and 1951.** Subsequent departures from its targets are useful indications of changes in economic policy. It is the purpose of this paper to provide basic materials which may aid future analysis of the accomplishments of the chemical industry in relation to the goals of the Five Year Plan.

1. Role of the Plan.

The Five Year Plan, as a guide to action, must be flexible enough to permit adjustment to particular situations in the economic-political environment and yet inflexible enough to prevent unbalanced development within the various sectors of the economy. Some degree of flexibility is achieved by the use of annual plans and, in times of crisis, by the use of quarterly and monthly plans which provide more rapid adjustment to changing conditions. Such annual, quarterly, and monthly plans may contain deviations from the targets of the Five Year Plan. Some degree of control is achieved by the use of the Five Year Plan targets as a priority consideration in the normal establishment of operating targets for the annual, quarterly, and monthly plans. Another factor in compelling maximum adherence to the Plan is the fact that the economic success of the regime is largely judged by achievement and overfulfillment of the individual plan targets.

2. Derivation of the Plan.

In July 1950 the Third Convention of the SED (Socialist Unity Party) adopted a series of proposals for the first Five Year Plan of the GDR. On 10 August 1950, this Plan was formally presented to the Minister President.¹*** These proposals **** serve to highlight the importance of the SED in the economic planning of the nation.

* Also designated as the GDR (German Democratic Republic).

** This paper will subsequently place major emphasis on the material balance sections of the Plan.

*** Footnote references in arabic numerals are to sources listed in Appendix E.

**** In this report, these proposals will subsequently be termed "the SED Plan."

The SED Plan was subjected to careful analysis and revision by governmental components. The Chemicals Section of the State Secretariat for Material Procurement, for example, drew up in July 1951 a draft plan for 68 titles* of key importance.^{2/**} The July draft contained many significant revisions of goals within the SED Plan, as the draft, unlike its predecessor, reflected full knowledge of the actual performance in 1950.

On 1 November 1951 the final draft*** of the Five Year Plan was approved.^{3/} This draft, the November Plan, apparently contained some 30 items classified as chemicals as well as aggregate plans in value terms for 4 subcategories of the chemical category: basic chemicals, pharmaceuticals, rubber and asbestos products, and oils and tar products.**** A grand total for the industry was given in value terms.^{4/} Of these items, 17 were directly comparable to titles contained in the July draft; only 3 reflected any changes in the planned production for 1955. Although the July draft contained approximately 40 more titles than the November Plan, many of these were included within some of the more inclusive classifications used in the latter. On the other hand, the November Plan added nine items not included in the chemicals listed in the July draft.*****

Of the three sets of documents--the SED Plan, the July draft, and the November Plan--the last-named is assumed to represent the firmest estimate of chemical growth trends in the years 1951-55. As such, it is the document which will receive greatest attention in this paper.

3. Terminology.

The following specialized terms are used within the various plan drafts.*****

a. Total Availability is the sum of domestic production, imports, opening inventory, and withdrawals from other sources. It is equated to Total Distribution.

b. Inventory when used as contributing to availability is the inventory on hand at the beginning of the year. It seems to be a relatively arbitrary term with little relation to any actual holdings of inventories. In use it seems to be a balancing term which is used to equate availability and distribution as well as to indicate desired movements in stocks. This title is convenient for making reserve entries.

-
- * The titles include individual commodities and aggregate classifications.
 - ** This draft will be termed "the July draft" in the following pages.
 - *** The final draft is subsequently termed "the November Plan."
 - **** See Appendix C, Methodology.
 - ***** The nine items are sulfuric acid, nitric acid, alumina, caprolactam, benzol, crude phenol, pure phenol, crude coal tar, and brown coal tar.
 - ***** References to title entries in the plans (exclusive of individual products) will be capitalized.

c. Production is the entry covering domestic production. The plans further divide production into (1) that part produced by the SAG's (the Soviet-owned corporations) and (2) that part produced by the nationalized industry. In some cases the production attributed to these categories does not add up to the total, the difference usually being the amount of private production. Subsequent transfers of SAG's to East German ownership have invalidated, for the purposes of this paper, the retention of the distinctions between SAG and nationalized production.

d. Import is a self-explanatory item. For purposes of constructing a material balance of availability and distribution, imports are as much a contributor to total supply as domestic production. A primary difference between the preliminary drafts and the final Plan is that the latter presumably contains trade figures largely based on the Five Year Trade Agreements concluded in September 1951. The net effect of this would be to firm the trade predictions.

e. Other Sources is a category listed as contributing to Total Availability. Although no chemicals listed in the plans have entries in this category, a guess may be made about the identity of this entry. It could cover withdrawals from reserves and from the so-called "domestic reserves," which include excess stocks held locally.

f. Total Distribution is the sum of allocations to Industrial Consumption, Construction Requirements, Industrial Investment, Agricultural Requirements and Investment, Other Requirements and Investment, Consumption by the People, Reparations and Government Orders, Export, Operative Reserve, Year-End Inventory, and any other reserves. Total Distribution balances Total Availability within the Plan.

g. Industrial Consumption covers allocations to industrial enterprises to cover process requirements and other requirements exclusive of construction and industrial investment. From the nature of the entries it appears that this category includes requirements for repair, modernization, and allocations made against depreciation entries.

h. Construction Requirements appear to exclude new industrial equipment, which presumably is included as Industrial Investment.

i. Industrial Investment is a term corresponding closely to capital investment. It appears to cover the installation of new equipment in new installations, as distinguished from the replacement or repair of equipment. It excludes capital investment in nonindustrial fields such as agriculture and transportation.

j. Agricultural Requirements includes Agricultural Investment as a subcategory apparently covering additions to agricultural equipment.

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k. Transportation Requirements includes Transportation Investment as a subcategory covering new equipment allocations.

l. Other Requirements is an elusive category, which possibly could mask some allocations of a military nature. It may also include institutions of a nonindustrial nature, such as hospitals. In this connection the bulk of the allocations of insulin and penicillin is made to Other Requirements. A subcategory for Investment is carried.

m. Consumption by the People basically is allocations in which the individual consumer is the ultimate consumer. It consists mostly of items moving into retail channels.

n. Reparations and Government Orders is a category which appears to be deceptive. It is inherently confusing since it groups two distinct categories, "Reparations" and "Government Orders." In experience, the term "Government Orders" has been used to cover paramilitary procurement, special procurement for governmental projects and enterprises, and quite possibly special transfers to Soviet occupation authorities. Furthermore, the totals assigned to the category Reparations and Government Orders appear to be distinctly understated.

o. Export in the final Plan presumably reflects the inclusion of the long-term trade agreements established in 1951.

p. Operative Reserve appears to be a term covering the unallocated residue of Total Availability. In the Five Year Plan it apparently represents an area of slack which gives a certain degree of flexibility to the Plan, for coverage of unforeseen circumstances. In this respect it is conceptually different from the State Reserve, which is an account receiving distinct allocations within a set priority. The amounts entered to Operative Reserve, being an anticipated residue of supply available for distribution, presumably would not be covered by any priorities unless the account is used as a screen for other purposes.

The amount entered to Operative Reserve in a given year possibly is available for State Reserves, in whole or in part. In the November Plan, which contains no State Reserve category, the Operative Reserve account, in some instances, appears to have covered allocations to State Reserves. Under any circumstances it appears that it would be possible to transfer supplies from the Operative Reserve category to the State Reserves unless a more urgent alternative were present.

The Operative Reserve category is closely interlinked with a study of the East German potential for strategic stockpiles. Unfortunately, it poses a great analytical problem, because it is a cumulative account. In this respect it is unlike the inventory entries, which, by use of Year-Beginning and Year-End entries, show both the total magnitude of the inventory and the net changes during the year. By contrast, the total of the entries to Operative Reserve

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over the five-year period of the Plan appears to represent a combination of (1) potential supplementary allocations to consumption accounts and (2) potential additions to State Reserves.

q. Year-End Inventory is an account which nominally represents the scale of inventories available at the end of the year. It represents deferred availability, being equated with the Opening Inventory entry for the next year and thus contributing to the next year's availability. Comparison with the Opening Inventory for the year completed theoretically indicates net anticipated changes in inventory. The previously mentioned limitations of the Inventory entries (see page 3) restrict use of these accounts for analytical purposes.

Additional entries used in the July draft:

r. State Material Reserve is carried both (1) as an entry contributing to availability and (2) as an account receiving allocations. It thus indicates gross reserves and annual changes in reserves. There is little evidence on the reliability of entries to this account.

s. General Industrial Repair Consumption is an account which apparently is absorbed in the Industrial Consumption account of the November Plan.

t. Other Nonindustrial Consumption is an account which probably equates with the Other Consumption account in the November Plan.

4. Commodities Covered.

Appendix A lists the commodities covered in the various drafts.

II. Projected Importance of the Chemical Industry.

The Five Year Plan places important emphasis upon the expansion of the chemical industry, which is projected to expand faster than total national production. Noteworthy is the projected expansion in the production of chemical capital equipment, a program scheduled to reach its peak in 1953 for some types of equipment and in 1954 for other types. In 1955, when the expansion program is relatively complete, attention is to be given to plant modernization and to the replacement of old and obsolete equipment. These facts imply that by sometime in 1954 the basic production capacity contemplated in the Plan will be reached. It is significant that this also appears to be a level of domestic production which represents substantial self-sufficiency in the supply of basic chemicals. This is perhaps the major goal of the Plan for this industry.

The production of chemical equipment, including pumps and compressors, apparently is being pushed to satisfy two major markets: the domestic capital expansion program and the pressing requirements of the rest of the Soviet Bloc for this equipment. Production failures in the equipment field would have major repercussions on the final fulfillment of the Plan.

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Table 1* helps to illustrate the projected importance of the chemical industry and of the chemical equipment industry. It shows that both industries are to increase their proportionate shares of the total national production. The proportion of chemical imports to total imports is to decline slightly, as will the share of chemicals in total exports. Chemicals, none the less, are expected to continue as a major export item.

Chemical equipment is expected to increase greatly in relative importance as an export item.

Chemical inventories are projected as increasing in-scale faster than the national aggregate total for Year-End inventories. Inventory headings do not appear large in relation to the importance of the chemical industry.

III. Subcategories of the Chemical and Chemical Equipment Industries.

The East Germans classify the chemical industry** into four subcategories: Basic Chemicals (Classification Prefix 61), Pharmaceuticals (Classification Prefix 62), Rubber and Asbestos Products (Classification Prefix 63), the Oils and Tar Products (Classification Prefix 64). Reference to the Plan Position numbers cited in Appendix A will reveal the category and subcategory of each item included in the Plan, since the first two digits of each Plan Position number are the classification prefix corresponding to the subcategory.

Table 2*** gives anticipated changes in the production relationships of the four components of the chemical industry. It reveals increase in the production of Basic Chemicals, relative to the other three categories.

Figures 1-6**** illustrate the supply and distribution patterns for the chemical industry and for the chemical equipment industry. Data are provided also for the four subcategories of the chemical industry.

The chemical equipment industry is characterized by (1) relative self-sufficiency of supply and (2) great emphasis on export (see Figure 1). Also noteworthy is a sharp drop in Industrial Investment foreseen for 1955, but accompanied by a sharp rise in Industrial Consumption.

The chemical industry is relatively self-sufficient, as seen in Figure 2. It is noteworthy that, even though the bulk of the industry's output goes to Industrial Consumption, the industry's export market is quite important.

The supply and distribution patterns of the subcategory, Basic Chemicals, are similar to those of the main category, the Chemical Industry (see Figure 2).

* Table 1 follows on p. 8.

** The chemical equipment industry is treated as being distinct from the chemical industry.

*** Table 2 follows on p. 9.

**** Figures 1-6 follow on p. 8.

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Table 1

National Significance of the Chemical Industry and the Chemical Equipment Industry^{2/5/}
1951-55

	1951		1952		1953		1954		1955	
	Million DM	Percent	Million DM	Percent	Million DM	Percent	Million DM	Percent	Million DM	Percent
Production										
National Total	27,387	100.0	30,769	100.0	34,850	100.0	39,505	100.0	45,004	100.0
Chemical Industry	4,502	16.4	5,083	16.5	5,855	16.8	6,815	17.3	8,226	18.3
Chemical Equip. Industry	201	0.7	270	0.9	328	0.9	395	1.0	454	1.0
Imports										
National Total	1,434	100.0	1,664	100.0	1,807	100.0	1,849	100.0	1,992	100.0
Chemical Industry	196	13.7	204	12.3	215	11.9	226	12.2	241	12.1
Chemical Equip. Industry	0	0	5	0.3	5	0.3	5	0.3	5	0.3
Exports										
National Total	3,009	100.0	3,470	100.0	3,855	100.0	4,234	100.0	4,623	100.0
Chemical Industry	666	22.1	728	21.0	784	20.3	830	19.6	877	19.0
Chemical Equip. Industry	84	2.8	150	4.3	173	4.5	209	4.9	259	5.6
Year-End Inventories										
National Total	1,152	100.0	1,208	100.0	1,290	100.0	1,403	100.0	1,546	100.0
Chemical Industry	135	11.7	144	11.9	161	12.5	175	12.5	202	13.1
Chemical Equip. Industry	6	Ref.	6	Ref.	6	Ref.	6	Ref.	6	Ref.

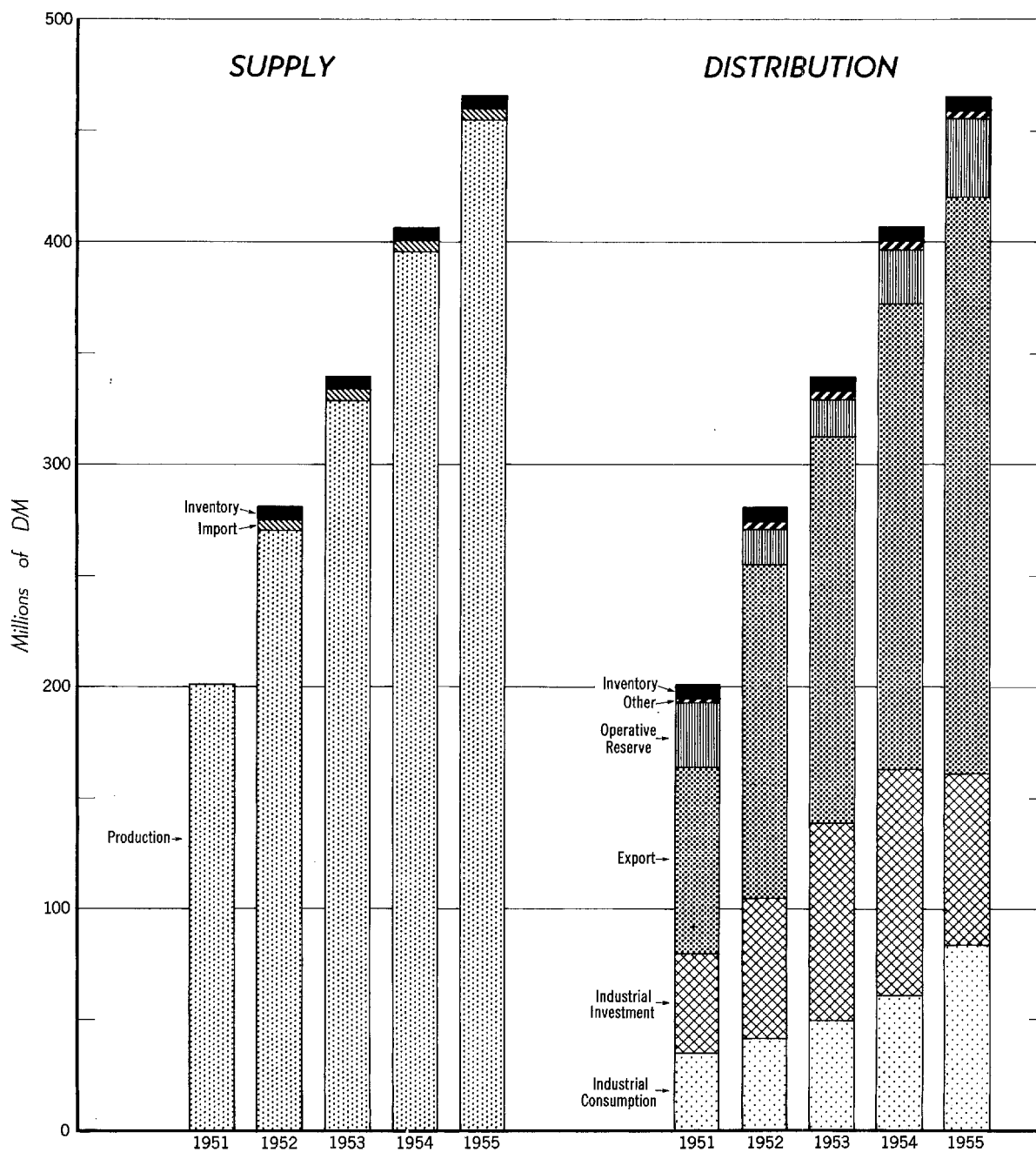
a. Including pumps and compressors.

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Figure 1

EAST GERMAN PLANNED SUPPLY AND DISTRIBUTION PATTERN CHEMICAL EQUIPMENT INDUSTRY, 1951-55



GR1486 CIA, 1-54

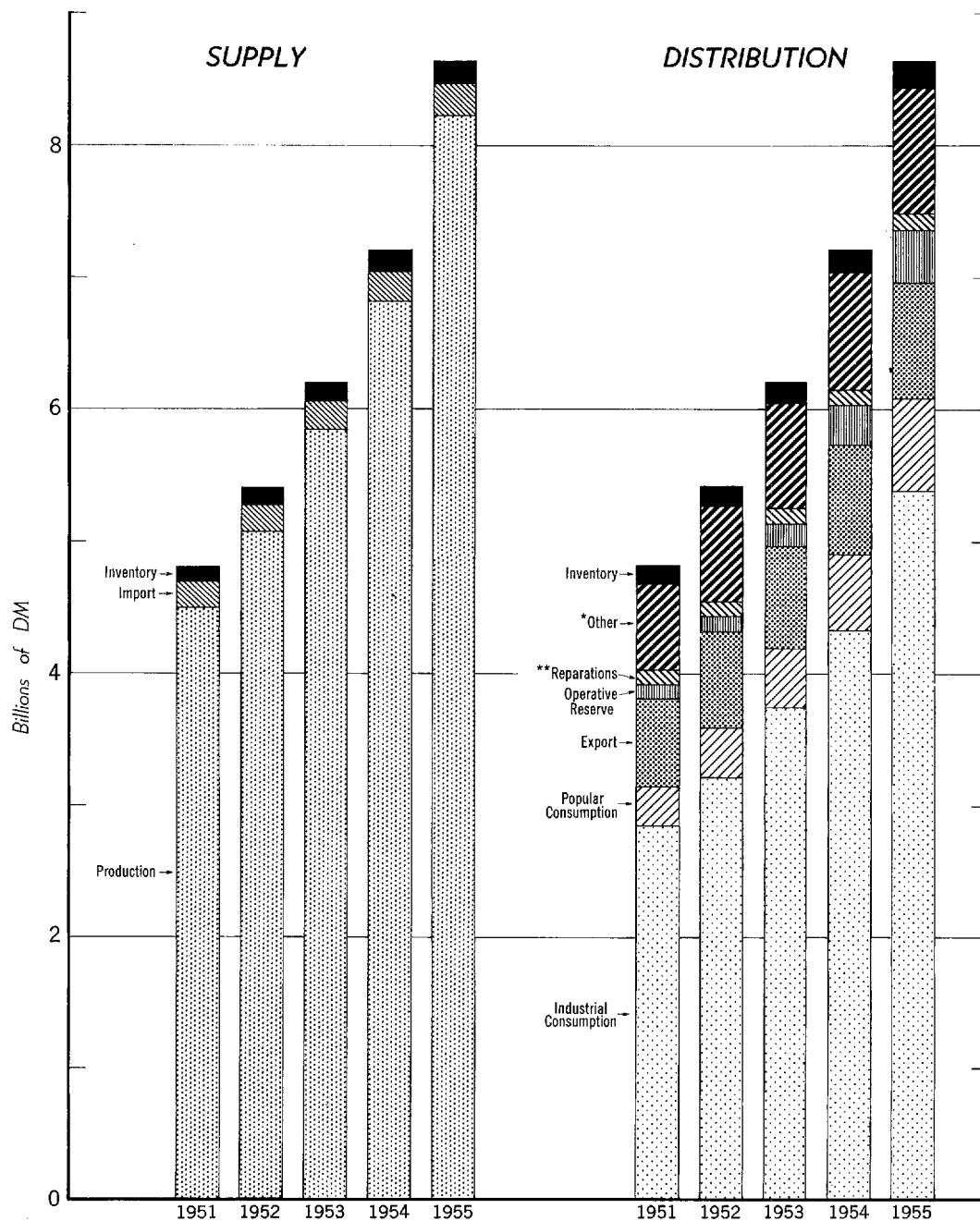
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Figure 2

EAST GERMAN PLANNED SUPPLY AND DISTRIBUTION PATTERN
TOTAL CHEMICAL INDUSTRY, 1951-55



GR1487 CIA, 1-54

*Includes construction, capital investment, transportation, and agriculture.

**Includes "Government Orders".

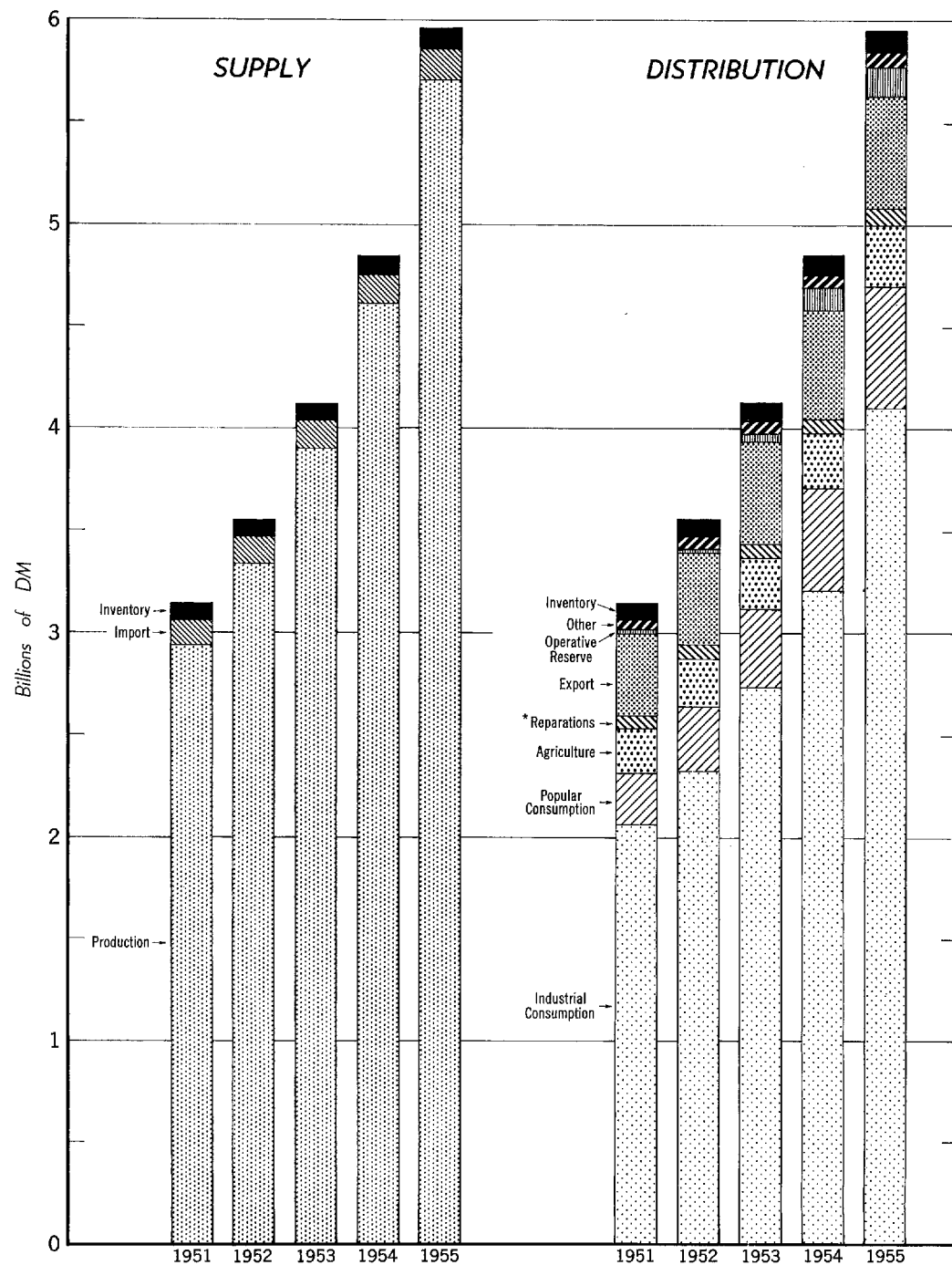
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Figure 3

EAST GERMAN PLANNED SUPPLY AND DISTRIBUTION PATTERN
BASIC CHEMICALS, 1951-55



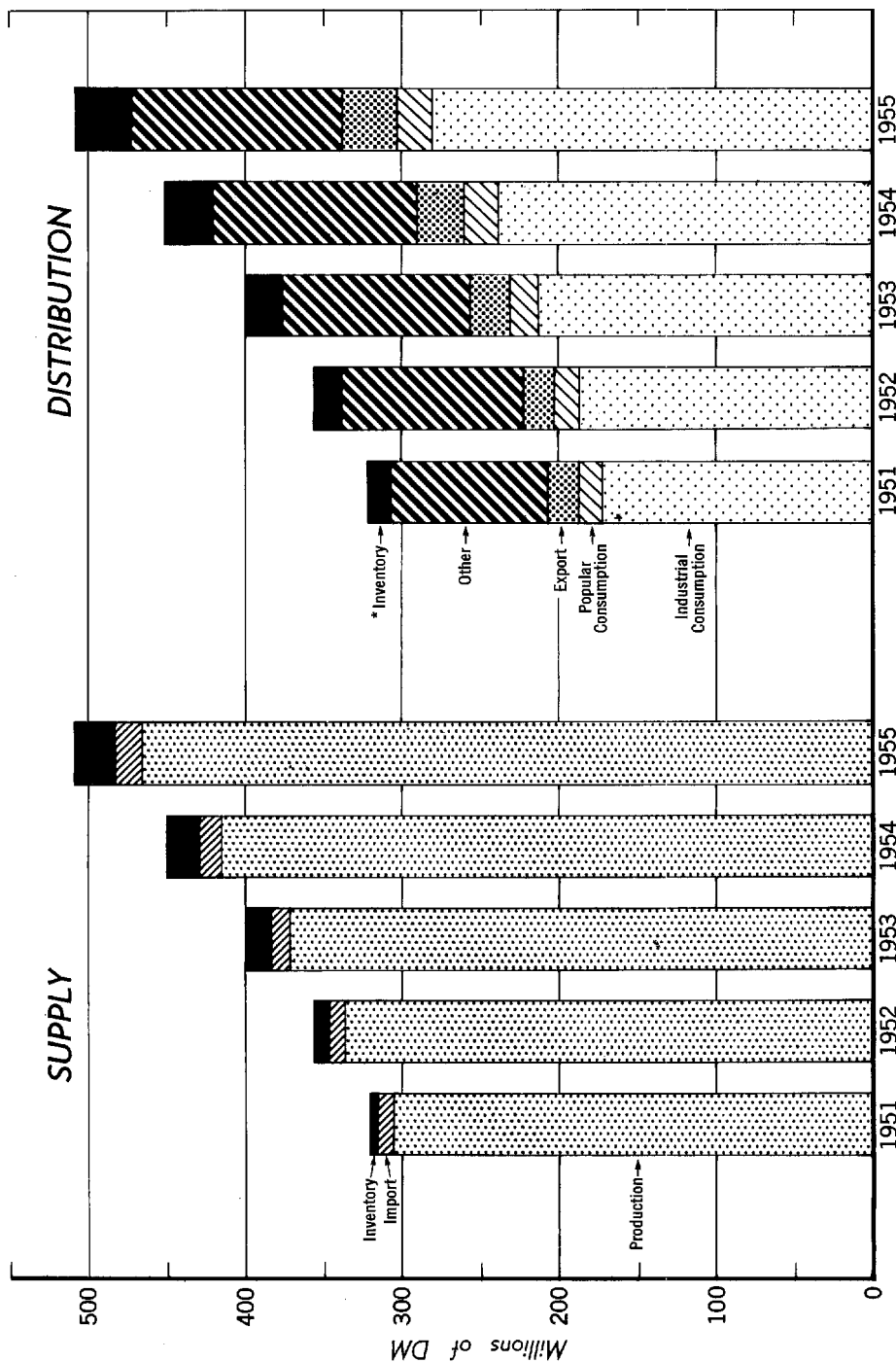
GR1485 CIA, 1-54

*Includes "Government Orders".

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Figure 4
EAST GERMAN PLANNED SUPPLY AND DISTRIBUTION PATTERN
PHARMACEUTICALS, 1951-55



GR1484 CIA, 1-54

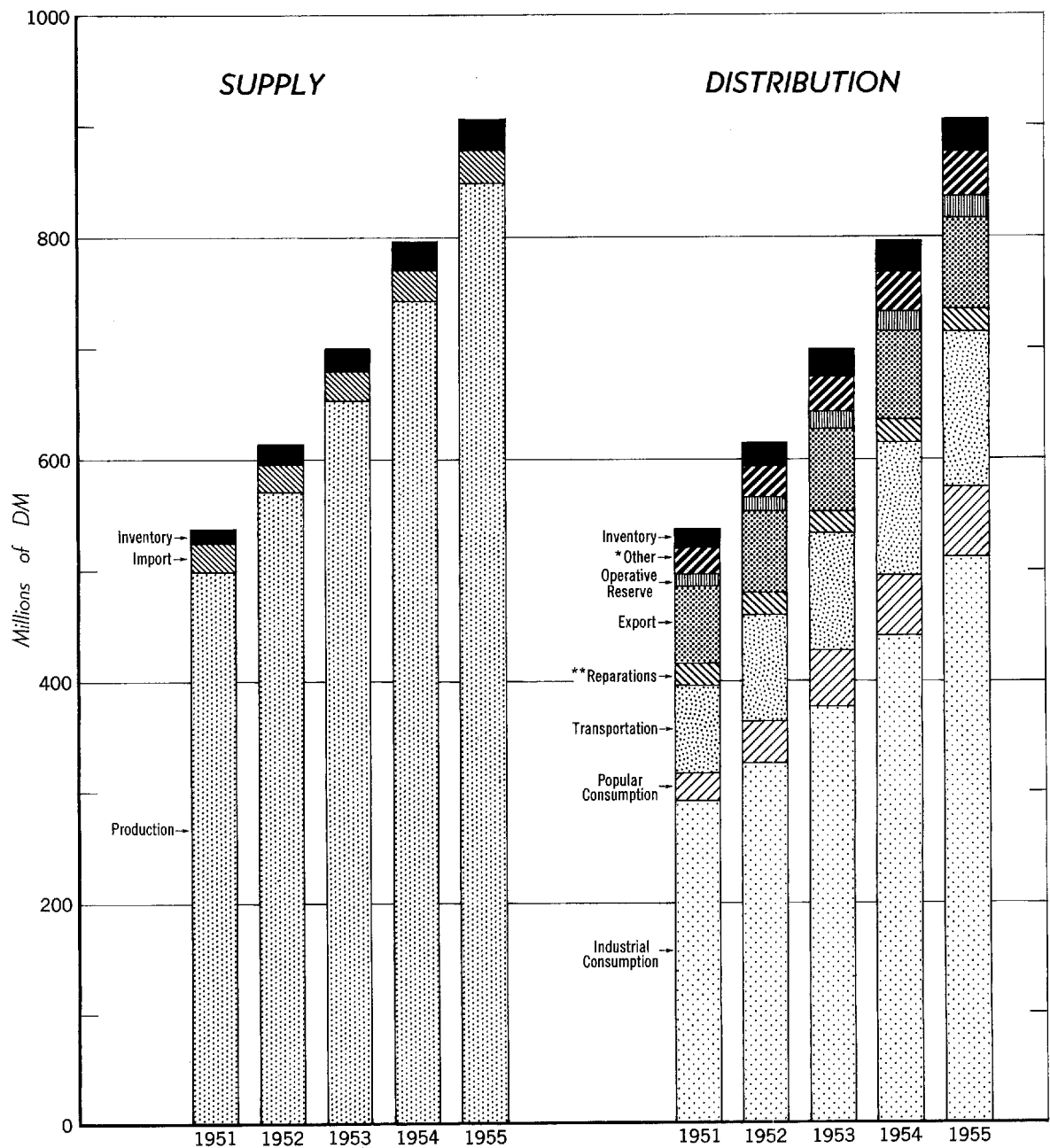
*Includes operative reserves (approx. 4 million DM/year).

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Figure 5

EAST GERMAN PLANNED SUPPLY AND DISTRIBUTION PATTERN RUBBER AND ASBESTOS PRODUCTS, 1951-55



GR1483 CIA, 1-54

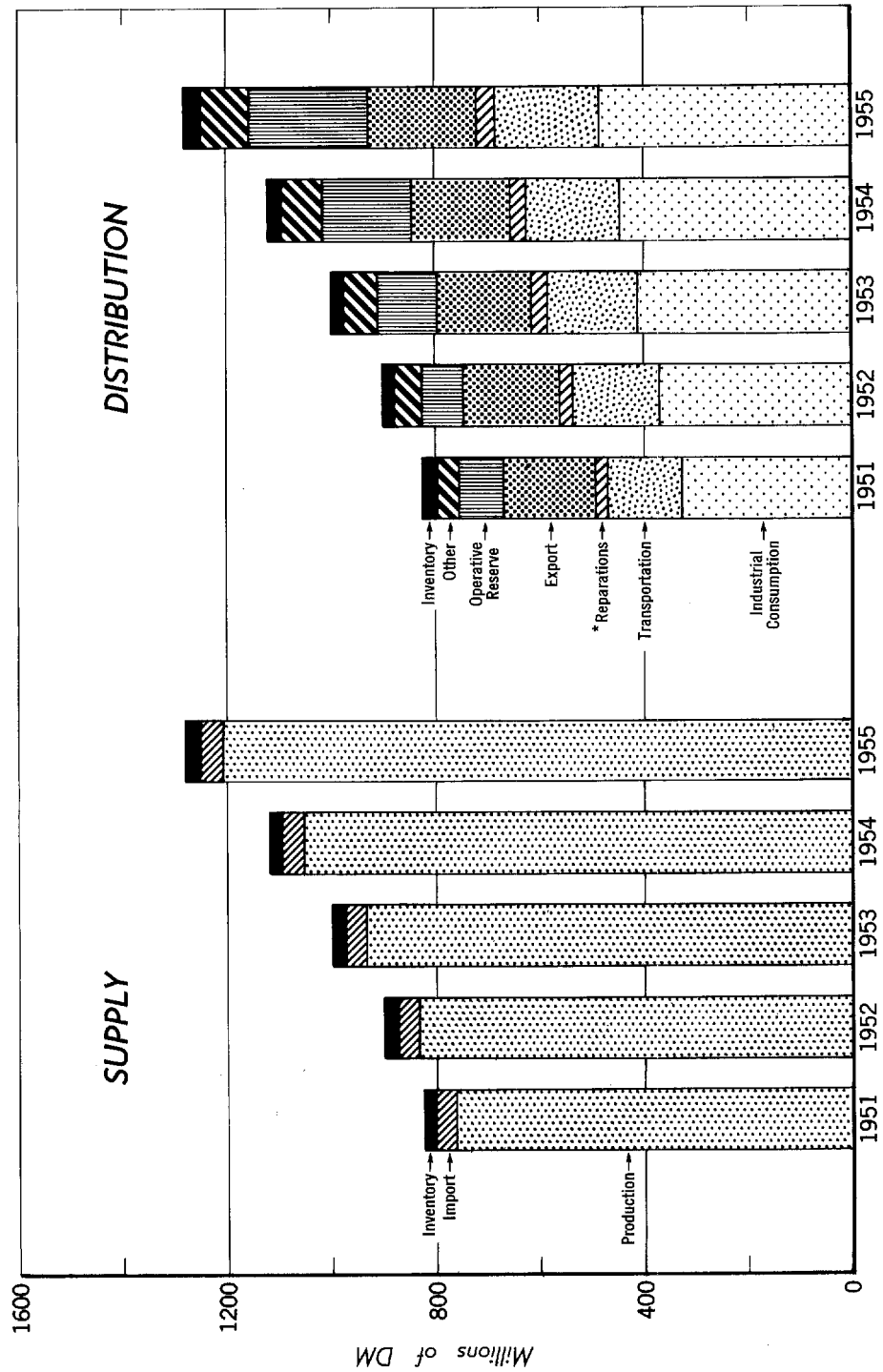
*Includes industrial investment and agriculture.

**Includes "Government Orders".

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Figure 6
EAST GERMAN PLANNED SUPPLY AND DISTRIBUTION PATTERN
OILS AND TAR PRODUCTS, 1951-55



GR1482 CIA, 1-54

* Includes "Government Orders".

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Table 2

Rates of Production in the East German Chemical Industry
by Subcategories 6/
1951-55

	1951		1952 (Million DM)	1953 (Million DM)	1954 (Million DM)	1955	
	Million DM	Percent				Million DM	Percent
Basic Chemicals	2,935	65.2	3,343	3,896	4,605	5,704	69.4
Pharmaceuticals	305	6.8	335	372	415	464	5.6
Rubber and Asbestos	499	11.1	570	652	742	848	10.3
Oils and Tar Products	763	16.9	835	935	1,053	1,210	14.7
Total	<u>4,502</u>	<u>100.0</u>	<u>5,083</u>	<u>5,855</u>	<u>6,815</u>	<u>8,226</u>	<u>100.0</u>

In Pharmaceuticals, the elusive category Other Requirements* appears as a consumer second only to Industrial Consumption (see Figure 4). Exports are somewhat less important in this subcategory than in the industry generally.

Transportation ranks second to Industrial Consumption as a consumer of Rubber and Asbestos Products (see Figure 5).

The Plan projects a large and noteworthy Operative Reserve for Oils and Tar Products (see Figure 6). In 1955, this reserve, the slack in the Plan, is larger than the projected allocation to Export or the allocation to Transportation.

IV. Production.**

An index of projected production expansion is given by the ratio of planned 1955 production to planned 1951 production.*** Table 3**** gives the results of this comparison. Heavy emphasis on the production of chemical equipment is noteworthy. In the aggregate, greater increases in production are scheduled for the chemical industry than are scheduled for the economy as a whole.

* In this case, Other Requirements presumably reflects hospital and medical requirements.

** This section is the first of 5 sections in which analysis will be conducted in terms of the industries, categories, subcategories, and title headings as used within the November Plan.

*** On the whole, 1951 targets were achieved.

**** Table 3 follows on p. 10.

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Table 3

Production Emphasis in the Chemical Industry: 1955 Planned Production in Terms of 1951 Planned Production %

		1951 Planned Production = 100	
Caprolactam	689	Crude Coal Tar	165
Alumina	639	Total Production, National	164
Synthetic Fibers including		Sulfuric Acid	163
Perlon	530	Benzol	161
Calcined Soda	435	Oils and Tar Products	159
Rayon	242	Pharmaceuticals	152
Chemical Pumps, Compressors,		Carbon Disulfide	147
and Equipment	226	Penicillin	147
Soap	226	Salicylic Acid	146
Compressors	222	Synthetic Rubber	145
Insulin	213	Plasticizers	144
Sulfur	210	Paints and Finishes	143
Phenol, Crude	208	Nitric Acid	140
Phosphorous Fertilizers	203	Cellulose Fibers	139
Tires and Tubes	201	Brown Coal Tar and Light	
Chemical Installations	195	Oils	133
Basic Chemicals	194	Inorganic Dyes and Pigments	132
Phenol, Pure	191	Nitrogenous Fertilizers	127
Chemical Industry	183	Calcium Carbide/Acetylene	124
Rubber and Asbestos	170	Film	124
Caustic Soda	169	Equipment for Synthetic	
Sodium Sulfate	166	Fibers and Cellulose	117 a/
Pumps	165	Total Solvents	114

a. Production peaked in 1953 at 385.

Generally the patterns emerge as might be predicted. Heavy expansion is foreseen in the dynamic field of synthetic fibers. Caprolactam, a basic feed material in this new field, heads the list with the greatest scheduled production increase. Phenols, important in the expanding plastics industry, are to receive production emphasis. Since transportation is slated for great expansion in the Plan, production of tires and tubes is to be expanded greatly. Other projected increases are scheduled in areas designed to increase self-sufficiency in chemical materials which are critical and basic.

Many of the items scheduled for comparatively low increases are noteworthy. Examples of these are synthetic rubber,* nitric acid, solvents, and film.

* Production of this item is now receiving greater emphasis than scheduled in the Plan.

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Figure 7,* plotted on semilogarithmic paper, shows scheduled rates of increase for the chemical industry and its four subcategories. In this figure it is apparent that production of Basic Chemicals is scheduled for accelerating production. This would seem to be part of the deliberate policy to increase East German self-sufficiency in the chemical building-blocks so basic to its economy.

V. Consumption.

Industrial enterprises are the most important consumers of chemical products in general. Tables 4** and 5*** are designed to detail more specifically the importance of this industrial consumption.

Table 4 expresses the allocation going into Industrial Consumption in 1951 and in 1955, in terms of the percentage of total supply. Thus, crude phenol is shown as being distributed 100 percent to Industrial Consumption, with no allocation to exports, year-end inventory, or to nonindustrial consumers. On the other hand, insulin and phosphorous fertilizers show no allocation to industry, since only a relatively small portion of the output undergoes further processing. Some nitrogenous fertilizer is allocated to industry for garden plots. A significant number of tires is allocated to truck fleets operated by industrial enterprises. The various equipment subcategories appear at the bottom of the list since Industrial Consumption does not include investment.

In many ways Table 4 does not properly underscore the importance of Industrial Consumption. A distortion is introduced by comparing allocations to this category against Total Allocations (that is, total supply) which includes year-end inventories, exports, and reserves. These latter accounts represent withdrawals from domestic consumption for the current year.

Table 5 compares Industrial Consumption to the sum of allocations excluding Inventory, Export, and Operative Reserve. The accounts left after this exclusion are that part of production directly allocated for domestic consumption in the particular year. Table 5 then expresses Industrial Consumption as a percentage of the modified sum of allocations for the years 1951 and 1955. The various Plan titles are ranked in terms of these percentages. Three major groupings are apparent:

1. Items allotted entirely to Industrial Consumption.
2. Items for which Industrial Consumption is the largest account receiving allocations.
3. Items for which Industrial Consumption is not the largest account receiving allocations.

* Figure 7 follows p. 12.

** Table 4 follows on p. 12.

*** Table 5 follows on p. 13.

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Allocations to Industrial Consumption
Expressed as Percentage of Total Distribution 8/

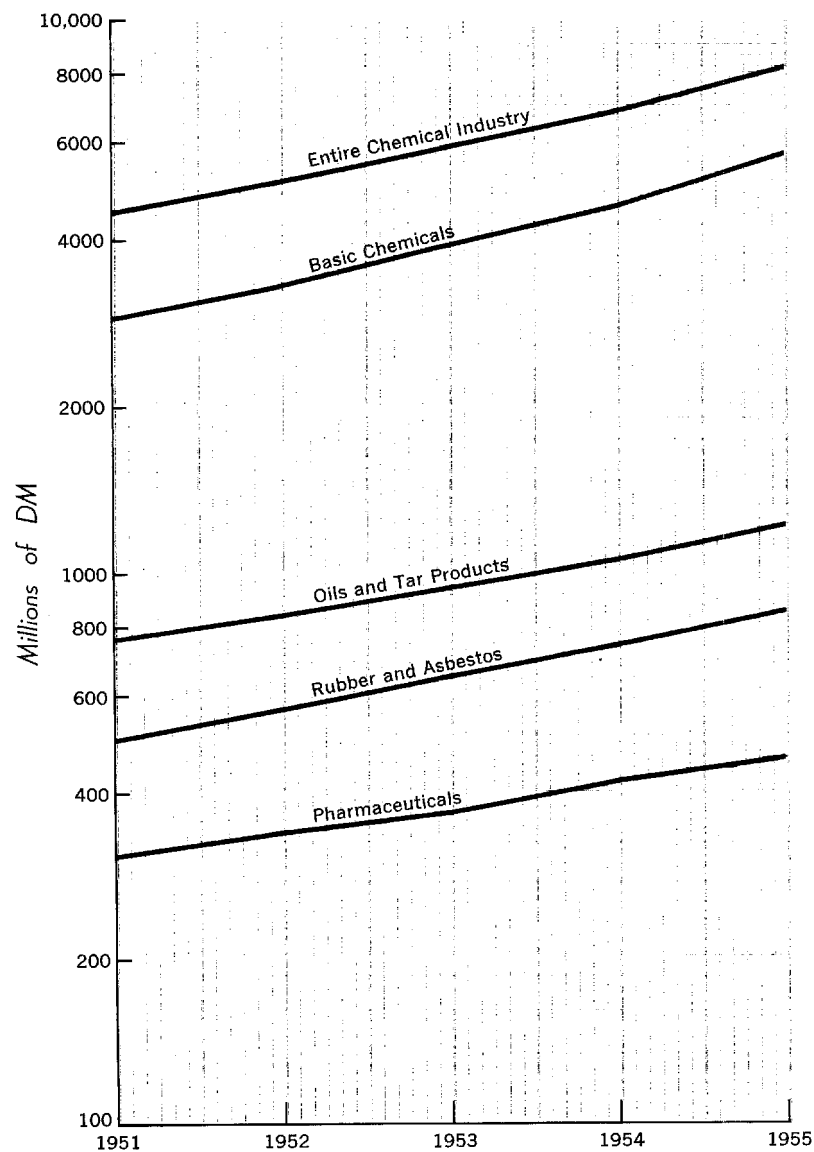
1951 Rank		1951 (Percent)	Change a/	1951 (Percent)	1955 Rank
1	Phenol, Crude	100		98.6	5
2	Benzol	99.3		99.0	1
3	Caprolactam	99.3		84.9	15
4	Calcined Soda	98.9		95.0	10
5	Brown Coal Tar and Light Oils	98.8		98.8	3
6	Sulfuric Acid	98.6	/	98.9	2
7	Nitric Acid	98.1	/	98.7	4
8	Caustic Soda	96.4		96.0	9
9	Rayon	94.7	/	96.6	7
10	Carbon Disulfide	92.8	/	96.1	8
11	Calcium Carbide/Acetylene	92.8		92.7	12
12	Crude Coal Tar	92.0	/	93.5	11
13	Cellulose Fibers	90.5		80.4	18
14	Phenol, Pure	87.0	/	97.8	6
15	Salicylic Acid	85.5		83.6	17
16	Inorganic Dyes and Pigments	83.6	/	90.2	13
17	Alumina	73.5	/	88.0	14
18	Sulfur	70.9		57.3	23
19	Total Solvents	66.6	/	79.2	19
20	Basic Chemicals	65.7	/	68.9	20
21	Synthetic Fibers including Perlon	63.1	/	83.8	16
22	Chemical Industry	59.1	/	62.2	21
23	Photo and Movie Film	58.3		42.7	29
24	Rubber and Asbestos Products	54.3	/	56.5	24
25	Pharmaceuticals	53.5	/	55.2	26
26	Synthetic Rubber	51.7		50.1	28
27	Paints and Finishes	49.2	/	52.8	27
28	Plasticizers	46.0	/	55.8	25
29	Total Production, National	40.4	/	41.7	30
30	Oils and Tar Products	39.3		37.8	31
31	Vehicle Tires and Tubes	33.9	/	36.5	32
32	Compressors	31.4	/	36.2	33
33	Chemical Pumps, Compressors, and Equipment	17.5	/	18.1	34
34	Pumps	13.9	/	14.7	36
35	Chemical Installations	12.6	/	15.8	35
36	Sodium Sulfate	9.8	/	58.1	22
37	Soap	4.1		2.9	40
38	Nitrogenous Fertilizers	4.0		3.3	39
39	Installations for Cellulose and Synthetic Fiber Industry	1.2	/	3.6	38
40	Penicillin	0	/	11.7	37
41	Insulin	0		0	41
42	Phosphorous Fertilizers	0		0	42

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Figure 7

EAST GERMANY
COMPARATIVE RATES OF PRODUCTION INCREASES,
PLANNED FOR 1951-55



Note: On this chart a straight line indicates a constant rate of increase.
(Plotted on semi-logarithmic paper)

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Table 5

Allocations to Industrial Consumption
Expressed as Percentage of Total Distribution
Excluding Inventory, Export, and Operative Reserve 9/

	<u>1951</u> <u>Plan</u>	<u>1955</u> <u>Plan</u>
<u>Class 1</u>		
Sulfur	100	100
Carbon Disulfide	100	100
Sulfuric Acid	100	100
Sodium Sulfate	100	100
Calcined Soda	100	100
Caustic Soda	100	100
Nitric Acid	100	100
Alumina	100	100
Caprolactam	100	100
Total Solvents	100	100
Plasticizers	100	100
Synthetic Rubber	100	100
Benzol	100	100
Phenol, Crude	100	100
Phenol, Pure	100	100
Crude Coal Tar	100	100
Brown Coal Tar and Light Oils	100	100
Rayon	100	100
Cellulose Fibers	100	100
Synthetic Fiber including Perlon	100	100
<u>Class 2</u>		
Inorganic Dyes and Pigments	98.3 a/*	98.8 a/
Calcium Carbide/Acetylene	98.0 a/	97.6 a/
Salicylic Acid	97.6 a/	95.3 a/
Photo and Movie Film	91.6 a/	84.3 a/
Basic Chemicals	78.1 a/	79.7 a/
Chemical Industry	73.0 a/	75.0 a/
Rubber and Asbestos Products	66.3 a/	65.9 a/
Oils and Tar Products	60.5 a/	59.7 a/
Pharmaceuticals	59.8 a/	64.1 a/
Paints and Finishes	59.0 a/	60.9 a/
Compressors	57.8 a/	77.7 a/
Total Production, National	48.5 a/	49.6 a/
Chemical Pumps, Compressors, and Equipment	42.2	51.0 a/
Chemical Installations	36.7	62.8 a/

* Footnote for Table 5 follows on p. 14.

S-E-C-R-E-TTable 5
(Continued)

	<u>1951</u> <u>Plan</u>	<u>1955</u> <u>Plan</u>
<u>Class 3</u>		
Vehicle Tires and Tubes	37.0	39.0
Pumps	26.1	27.4
Penicillin	0.0	16.3
Nitrogenous Fertilizers	4.9	4.1
Soap	4.4	3.0
Installations for Cellulose and Synthetic Fiber Industry	0.02	0.1
Phosphorous Fertilizers	0.0	0.0
Insulin	0.0	0.0

a. Industrial Consumption, although it is not the sole account receiving entries, is the largest one.

Significantly, the equipment categories split between classes 2 and 3, reflecting the importance of the rival account Industrial Investment.

For items in classes 1 and 2, comparisons based on Industrial Consumption will be relatively important in the study of the demand structure. For items in class 3, comparisons based on Industrial Consumption will not be representative of the demand structure. The latter items are the category Chemical Pumps, Compressors, and Equipment; and the product headings: vehicle tires and tubes, pumps, penicillin, nitrogenous fertilizers, soap, installations for the cellulose and synthetic fiber industry, phosphorous fertilizers, insulin. Both the general category Chemical Pumps, Compressors, and Equipment and the subcategory Chemical Installations which were class 3 in 1951 become class 2 in 1955 and will be considered as class 2 items.

Table 6* gives a comparison of the relative changes by 1955 in total production indexes and in industrial consumption indexes for those items in which industrial consumption is the largest single component of consumption (that is, class 1 and class 2 items). An Index of Significance** is used to rank-order the

* Table 6 follows on p. 15.

** See Table 6, p.15, for explanation of the Index.

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Table 6

Relative Increases, Total Production, and Industrial Consumption 10/ a/*
 1955 Index of Industrial Consumption Compared with
 1955 Index of Total Production

1951 Planned Production = 100

	<u>Industrial Consumption</u>	<u>Total Production</u>	<u>Index of Significance</u> <u>b/</u>
A. Items for which industrial consumption is to rise relative to total production:			
Sodium Sulfate	982	166	-71.6
Chemical Installations	255	195	-13.3
Synthetic Fibers including			
Perlon	687	530	-12.9
Phenol, Pure	235	191	-10.3
Total Solvents	135	114	- 8.4
Plasticizers	168	144	- 7.7
Compressors	257	222	- 7.3
Inorganic Dyes and Pigments	145	132	- 4.7
Pharmaceuticals	163	152	- 3.5
Paints and Finishes	152	143	- 3.1
Chemical Pumps, Compressors, and Equipment	239	226	- 2.8
Benzol	167	161	- 1.8
Chemical Industry	189	183	- 1.6
Rubber and Asbestos Products	175	170	- 1.4
Basic Chemicals	199	194	- 1.3
Carbon Disulfide	151	147	- 1.3
B. Items for which parallel increases in industrial consumption and total production are scheduled:			
Rayon	247	242	- 1.0
Nitric Acid	141	140	- 0.4
Salicylic Acid	147	146	- 0.3
Sulfuric Acid	163	163	0.0
Calcium Carbide/Acetylene	124	124	0.0
Total Production, National	163	164	+ 0.3

* Footnotes for Table 6 follow on p. 16.

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S-E-C-R-E-TTable 6
(Continued)

1951 Planned Production = 100

	<u>Industrial Consumption</u>	<u>Total Production</u>	<u>Index of Significance b/</u>
--	-----------------------------------	-----------------------------	-------------------------------------

C. Items for which are scheduled greater increases in total production than in Industrial Consumption:

Phenol, Crude	203	208	+ 1.2
Synthetic Rubber	141	145	+ 1.4
Brown Coal Tar and Light Oils	126	133	+ 2.7
Oils and Tar Products	150	159	+ 2.9
Crude Coal Tar	155	165	+ 3.1
Caustic Soda	153	169	+ 5.0
Alumina	567	639	+ 6.0
Caprolactam	603	689	+ 6.7
Cellulose Fibers	120	139	+ 7.3
Sulfur	168	210	+ 11.1
Calcined Soda	337	435	+ 12.7
Photo and Movie Film	90	124	+ 15.9

a. Class 3 items have not been listed.

b. The Index of Significance has been computed on the basis: $\frac{(P-C)}{P+C} 100$,

where P equals the index of Total Production and C equals the index of Industrial Consumption.

items, listing first those items for which industrial consumption is likely to press on production. In such cases, industrial consumption must be satisfied by shifts of allocations from other categories such as Industrial Investment, Exports, Inventories, or a reserve category, or else material shortages will result, assuming that production does not exceed plans.

For some of the items,* scheduled increases in production would seem to improve the supply situation, although, as in the case of film, scheduled increases in exports may result in a continuing tight market.

Table 7** gives the projected increases in industrial consumption in order of rank. The upper half of the list may be considered as dynamic growth factors in the demand picture.

* See items in Section C of Table 6.

** Table 7 follows on p. 17.

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Table 7

Indexes of Industrial Consumption 11/ a/
1955

1951 Plan = 100

Sodium Sulfate	982	Benzol	167
Synthetic Fibers including		Total, National	163
Perlon	687	Pharmaceuticals	163
Caprolactam	603	Sulfuric Acid	163
Alumina	567	Crude Coal Tar	155
Calcined Soda	337	Caustic Soda	153
Compressors	257	Paints and Finishes	152
Chemical Installations	255	Carbon Disulfide	151
Rayon	247	Oils and Tar Products	150
Chemical Pumps, Compressors,		Salicylic Acid	147
and Equipment	239	Inorganic Dyes and Pigments	145
Phenol, Pure	235	Synthetic Rubber	141
Phenol, Crude	203	Nitric Acid	141
Basic Chemicals	199	Total Solvents	135
Chemical Industry	189	Brown Coal Tar and Light	
Rubber and Asbestos Products	175	Oils	126
Plasticizers	168	Calcium Carbide/Acetylene	124
Sulfur	168	Cellulose Fibers	120
		Photo and Movie Film	90

a. Class 3 items have been omitted from this listing.

VI. Reparations and Government Orders.

The various drafts of the Plan treat Reparations and Government Orders as a single category, thus invalidating much usefulness of the data. In practice the term "Government Orders" has been used to cover allocations for paramilitary supply.

The entries to the combined account appear to be nominal and are little indication of the extent of either component of the category. In the plans, few specific chemicals are allocated to this heading: paints and finishes, calcium carbide, vehicle tires, equipment categories, and the general subcategories of the chemical industry. Only 2.2 percent of the 1951 Total Availability within the chemical industry is so allocated, according to the November Plan. It is probable that the true extent has been masked.

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VII. Foreign Trade.

1. Imports.

The November Plan anticipates a sharp reduction in chemical imports by 1955, to be accompanied by a slight decline in chemical exports. This reflects the emphasis to be given to achieving virtual self-sufficiency in the chemical industry by 1955.*

Table 8** contrasts, by item, the planned percentages of total availability stemming from import, 1951 and 1955. All items display lessening dependence upon imports except benzol; pharmaceuticals; inorganic dyes and pigments; chemical installations; and the general category Chemical Pumps, Compressors, and Equipment. Of these, only benzol imports are to be very extensive.

In 1955, benzol, phosphorous fertilizers, and crude coal tar will exhibit the greatest dependence on imports, according to the Plan.

2. Exports.

Table 9*** illustrates anticipated shifts in the export pattern. By 1955, increased emphasis is indicated on exports of the various chemical equipment categories, photo and movie film, penicillin, cellulose fibers, nitrogenous fertilizers, sulfur, plasticizers, and calcium carbide. In general, however, the export market is expected to take a slightly lower percentage of Total Availability.

In many ways, a comparison of the extent of exports to the internal allocation of a product for Industrial Consumption is a better gauge of the economic significance of the exports. Table 10**** gives this comparison. The rank-order is very similar to that of Table 9, as is to be expected. Table 10 illustrates that the 1951 exports of sodium sulfate were to be the equivalent of 9 years' Industrial Consumption, at the 1951 rate. Synthetic rubber exports in the same year were to be the equivalent of 89 percent of 1951 Industrial Consumption. The exports of equipment are scheduled on an extremely significant scale.

* An implication of this is that if imports, nevertheless, maintain their 1951 levels, there will be an increased general capability to stockpile and/or to overfulfill plans.

** Table 8 follows on p. 19.

*** Table 9 follows on p.20.

**** Table 10 follows on p. 21.

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Table 8

Planned Imports Expressed as Percentage of Total Availability 12/ a/
1951 and 1955

<u>1951</u> <u>Rank</u>		<u>1951</u>	<u>Change b/</u>	<u>1955</u>	<u>1955</u> <u>Rank</u>
1	Benzol	68.1	/	69.3	1
2	Insulin	54.5		0.0	13
3	Phosphorous Fertilizers	53.2		14.9	2
4	Alumina	31.8		0.0	14
5	Calcine Soda	19.1		0.0	15
6	Crude Coal Tar	16.1		11.7	3
7	Caustic Soda	9.1		0.0	16
8	Brown Coal Tar and Light Oils	6.1		0.0	17
9	Oils and Tar Products	4.9		3.5	6
10	Rubber and Asbestos Products	4.7		3.2	8
11	Vehicle Tires and Tubes	4.6		0.0	19
12	National Availability	4.4		3.9	5
13	Chemicals, Total	4.1		2.8	9
14	Basic Chemicals	3.8		2.5	11
15	Pharmaceuticals	3.1	/	3.5	7
16	Inorganic Dyes and Pigments	3.0	/	5.5	4
17	Chemical Installations	0.0	/	2.6	10
18	Chemical Pumps, Compressors, and Equipment	0.0	/	1.1	12

a. No imports are listed for the following titles: Pumps, Compressors, Installations for Cellulose and Synthetic Fibers, Sulfur, Carbon Disulfide, Sulfuric Acid, Sodium Sulfate, Nitric Acid, Calcium Carbide/Acetylene, Nitrogenous Fertilizers, Caprolactam, Total Solvents, Plasticizers, Photo and Movie Film, Soap, Paints and Finishes, Penicillin, Salicylic Acid, Synthetic Rubber, Crude Phenol, Pure Phenol, Rayon, Cellulose Fibers, and Synthetic Fibers including Perlon.

b. An increase in the share of Total Availability stemming from Import in 1955 as compared to 1951 is indicated by a "/" in the Change column.

VIII. Reserves and Inventory.

As noted in the section on terminology* the entries for the various titles for inventories and reserves are probably little guide to the actual extent of stocks existing in 1951 or likely to exist in 1955. There is some chance that

* P. 3, above.

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Table 9

Planned Exports a/
Expressed as Percentage of Total Availability 13/
1951 and 1955

<u>1951</u> <u>Rank</u>		<u>1951</u> <u>Plan</u>	<u>Change b/</u>	<u>1955</u> <u>Plan</u>	<u>1955</u> <u>Rank</u>
1	Sodium Sulfate	89.0		41.2	6
2	Synthetic Rubber	46.2		45.1	5
3	Chemical Pumps, Compressors and Equipment	41.6	/	55.7	2
4	Pumps	38.6	/	39.7	7
5	Chemical Installations	38.0	/	60.1	1
6	Compressors	37.7	/	47.9	3
7	Installations for the Cellu- lose and Synthetic Fiber Industry	35.0		28.6	10
8	Photo and Movie Film	33.9	/	47.0	4
9	Total Solvents	26.8	/	17.7	13
10	Synthetic Fibers including Perlon	26.8		11.7	16
11	Penicillin	26.5	/	28.3	11
12	Sulfur	22.2	/	35.9	9
13	Plasticizers	21.8	/	37.5	8
14	Oils and Tar Products	21.4		16.3	15
15	Nitrogenous Fertilizers	14.2	/	16.3	14
16	Paints and Finishes	14.1		6.6	23
17	Chemical Industry	13.8		10.1	17
18	Rubber and Asbestos Products	13.0		9.1	19
19	Basic Chemicals	12.8		9.2	18
20	Salicylic Acid	10.3		8.2	21
21	Total Production, National	9.2		9.0	20
22	Cellulose Fibers	8.4	/	18.8	12
23	Pharmaceuticals	6.2	/	6.9	22
24	Inorganic Dyes and Pigments	3.9		1.8	25
25	Calcium Carbide/Acetylene	1.9	/	4.8	24
26	Carbon Disulfide	1.4		0	26

a. No exports are listed for the following titles: Sulfuric Acid, Calcined Soda, Caustic Soda, Nitric Acid, Phosphorous Fertilizers, Alumina, Caprolactam, Soap, Insulin, Vehicle Tires and Tubes, Benzol, Crude Phenol, Pure Phenol, Crude Coal Tar, Brown Coal Tar and Light Oils, and Rayon.

b. An increase in the share of Total Availability for Export in 1955 as compared with 1951 is indicated by a "/" in the Change column.

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Table 10

Planned Exports
Expressed as Percentage of Industrial Consumption a/ 14/
1951 and 1955

	<u>1951</u> <u>Plan</u>	<u>1955</u> <u>Plan</u>
Sodium Sulfate	909.1	71.0
Chemical Installations	302.0	380.0
Chemical Pumps, Compressors and Equipment	237.3	307.5
Compressors	120.0	132.2
Synthetic Rubber	89.3	89.9
Photo and Movie Film	58.1	110.1
Oils and Tar Products	54.4	43.2
Plasticizers	47.5	67.2
Synthetic Fibers including Perlon	42.6	13.9
Total Solvents	40.2	22.4
Sulfur	31.3	62.7
Paints and Finishes	28.6	12.6
Rubber and Asbestos Products	24.0	16.0
Chemical Industry	23.4	16.3
Total Production, National	22.8	21.5
Basic Chemicals	19.4	13.4
Salicylic Acid	12.1	9.8
Pharmaceuticals	11.7	12.5
Cellulose Fibers	9.3	23.4
Inorganic Dyes and Pigments	4.6	2.0
Calcium Carbide/Acetylene	2.1	5.2
Carbon Disulfide	1.5	0

a. The ratio, for example, expresses 1951 Planned Export as a percentage of 1951 Planned Industrial Consumption. See Table 9 for those items for which exports were not planned. The above list excludes class 3 items.

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the Plan may give an idea of anticipated relative movements in stocks. For example, reserve and inventory levels will be relatively low where demand is pressing on the supply of an item.*

1. Inventory.

Inventory levels reflect many conditions, such as ease of storage, the desire for protection against an uneven flow of supplies, the relative state of supply and demand, and the desire to give some flexibility to plans. It is also likely that, in the plans, the inventory entries mask some State Reserves.

Table 11** summarizes some of the Plan information about the Year-End Inventories for 1951 and 1955. The index used expresses the inventory entry as a percentage of Total Availability.

2. Operative Reserves.

In the Plan, Operative Reserves appear to represent potential entries to State Reserves and/or potential allocations to other headings. Operative Reserve entries in the equipment field are generally significant and probably serve to give flexibility to the capital expansion program. Table 12*** utilizes 1951 and 1955 indexes expressing Operative Reserve entries as percentages of Total Availability.

As mentioned in Terminology, Operative Reserve entries in the Plans are at least partially cumulative. Table 13**** gives an indication of the maximum extent of Operative Reserves assuming (1) that no stocks identified as Operative Reserves existed prior to the first year of the Five Year Plan and (2) that each entry from 1951 through 1955 was cumulatively added to State Reserves.***** On these assumptions, by 1955 the general level of stockpiles created from the Operative Reserve entries would be one-fifth of a year's supply for the chemical industry, in aggregate value terms. In the equipment categories, replacement stocks would be quite extensive.

The July draft does carry some nominal entries to State Material Reserve. Comparison with the November Plan indicates that in the case of rubber the November Plan apparently carries State Material Reserves as Year-end inventories. Similar illustrations indicate that the November Plan, which carries no State Material Reserve account, masks possible allocations to this account within its entries to Inventory and to Operative Reserve.

* An exception would be the case in which a high level of reserve is maintained by enforcement of a high priority for allocation to reserve.

** Table 11 follows on p. 23.

*** Table 12 follows on p. 24.

**** Table 13 follows on p. 26.

***** This is extremely improbable, but it displays the analytical problem created by the cumulative nature of these entries. Actually it is not the amount of the annual allocation to Operative Reserve which will be consumed currently and the amount which will be deferred cannot be determined from the Plan.

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Table 11

Planned Inventory Levels Expressed as Percentage of Total Availability 15/
1951 and 1955

<u>1951</u> <u>Rank</u>		<u>31 Dec</u> <u>1951</u>	<u>Change</u> ^{a/} <u>*</u>	<u>31 Dec</u> <u>1955</u>	<u>1955</u> <u>Rank</u>
1	Penicillin	0.0		0.0	1
2	Insulin	0.0		0.0	2
3	Phenol, Crude	0.0	/	0.6	5
4	Installations for Cellulose and Synthetic Fiber Industry	0.0	/	4.8	36
5	Caprolactam	0.7	/	5.5	38
6	Benzol	0.7	/	1.0	12
7	Calcium Carbide/Acetylene	0.7		0.2	3
8	Nitric Acid	0.9		0.7	8
9	Caustic Soda	1.0		0.7	7
10	Cellulose Fibers	1.0		0.8	11
11	Sulfuric Acid	1.0		0.6	6
12	Calcined Soda	1.1		0.3	4
13	Phenol, Pure	1.2		1.1	14
14	Brown Coal Tar and Light Oils	1.2		1.2	15
15	Sodium Sulfate	1.2		0.7	9
16	Inorganic Dyes and Pigments	1.8		1.3	18
17	Paints and Finishes	1.9		1.3	19
18	Phosphorous Fertilizers	1.9		1.2	16
19	Synthetic Rubber	2.1	/	2.0	26
20	Salicylic Acid	2.1		4.1	35
21	Pumps	2.1		1.3	20
22	Film	2.5		1.0	13
23	Basic Chemicals	2.6		1.9	24
24	Rayon	2.8		2.0	27
25	Nitrogenous Fertilizers	2.8		0.7	10
26	Chemical Installations	2.8		1.4	22
27	Chemical Pumps, Compressors, and Equipment	2.8		1.2	17
28	Chemical Industry	2.8		2.3	29
29	Pharmaceuticals	3.1		5.9	39
30	Compressors	3.1		1.4	21
31	Rubber and Asbestos Products	3.2		3.0	32
32	Oils and Tar Products	3.4		2.3	30
33	Sulfur	3.5		1.7	23
34	All Industry	3.5		3.0	33

* Footnote for Table 11 follows on p. 24

S-E-C-R-E-T

S-E-C-R-E-TTable 11
(Continued)

<u>1951 Rank</u>		<u>31 Dec 1951</u>	<u>Change a/</u>	<u>31 Dec 1955</u>	<u>1955 Rank</u>
35	Vehicle Tires and Tubes	4.6	/	4.8	37
36	Total Solvents	4.6		2.7	31
37	Synthetic Fibers including Perlon	4.7		1.9	25
38	Carbon Disulfide	5.7		2.0	28
39	Soap	7.3		6.1	40
40	Crude Coal Tar	8.0		6.5	41
41	Alumina	26.5		8.0	42
42	Plasticizers	27.6		3.3	34

a. An increase in the share of Total Availability for Planned Inventory is indicated by a "/" in the Change column.

Table 12

Operative Reserves Expressed as Percentage of Total Availability 16/
1951 and 1955

<u>1951 Rank</u>		<u>Plan 31 Dec 1951</u>	<u>Change a/*</u>	<u>Plan 31 Dec 1955</u>	<u>1955 Rank</u>
1	Benzol	0.0		0.0	1
2	Phosphorous Fertilizers	0.0		0.0	2
3	Crude Coal Tar	0.0		0.0	3
4	Brown Coal Tar and Light Oils	0.0		0.0	4
5	Salicylic Acid	0.0		0.0	5
6	Penicillin	0.0		0.0	6
7	Insulin	0.0		0.0	7
8	Soap	0.0		0.0	8
9	Cellulose Fibers	0.0		0.0	9
10	Sodium Sulfate	0.0	/	0.2	11
11	Phenol, Crude	0.0	/	0.9	15
12	Photo and Movie Film	0.0	/	1.5	19
13	Carbon Disulfide	0.0	/	2.0	21

* Footnote for Table 12 follows on p. 25.

S-E-C-R-E-TTable 12
(Continued)

<u>1951</u> <u>Rank</u>		<u>Plan</u> <u>31 Dec</u> <u>1951</u>	<u>Change</u> ^{a/}	<u>Plan</u> <u>31 Dec</u> <u>1955</u>	<u>1955</u> <u>Rank</u>
14	Synthetic Rubber	0.0	/	2.8	25
15	Alumina	0.0	/	4.0	29
16	Calcined Soda	0.0	/	4.7	33
17	Caprolactam	0.0	/	9.6	39
18	Sulfuric Acid	0.4		0.4	12
19	Basic Chemicals	0.5	/	2.4	23
20	Paints and Finishes	0.7	/	5.3	36
21	Nitrogenous Fertilizers	0.8	/	3.9	28
22	Nitric Acid	0.9		0.7	14
23	Pharmaceuticals	1.2		1.0	16
24	Solvents	1.9		0.4	13
25	Rubber and Asbestos Products	1.9	/	2.2	22
26	Chemical Industry	2.4	/	4.6	32
27	Calcium Carbide/Acetylene	2.5		0.0	10
28	Rayon	2.5		1.4	18
29	Caustic Soda	2.5	/	3.3	26
30	Sulfur	3.2	/	5.1	34
31	Total for Industry	3.8	/	4.0	30
32	Vehicle Tires and Tubes	3.9		1.6	20
33	Plasticizers	4.6		3.3	27
34	Compressors	4.8		4.1	31
35	Synthetic Fibers including Perlon	5.4		2.6	24
36	Pumps	6.0		5.1	35
37	Inorganic Dyes and Pigments	9.2		5.5	37
38	Oils and Tar Products	10.2	/	17.9	41
39	Installations for Cellulose and Synthetic Fiber Industry	10.8	/	31.6	42
40	Phenol, Pure	11.7		1.1	17
41	Chemical Pumps, Compressors, and Equipment	14.2		7.5	38
42	Chemical Installations	24.9		13.3	40

a. An increase in the share of Total Availability for Operative Reserves is indicated by a "/" in the Change column.

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Table 13

Operative Reserves
Accumulated Total of Entries for 1951-55
Expressed as Percentage of 1955 Entry
to Industrial Consumption a/ 17

Chemical Installations	302.6	Caustic Soda	13.2
Chemical Equipment, Pumps and Compressors	143.6	Photo and Movie Film	10.8
Paints and Finishes	41.3	Synthetic Fibers including Perlon	9.6
All Industry	35.3	Carbon Disulfide	8.2
Compressors	34.5	Basic Chemicals	7.9
Sulfur	32.5	Pharmaceuticals	7.5
Inorganic Dyes and Pigments	32.2	Rayon	6.1
Plasticizers	29.9	Total Solvents	4.1
Alumina	27.2	Nitric Acid	3.4
Phenol, pure	23.6	Phenol, Crude	2.5
Synthetic Rubber	21.9	Sulfuric Acid	1.9
Chemical Industry	20.4	Sodium Sulfate	1.2
Caprolactam	18.8	Salicylic Acid	0.0
Calcined Soda	16.4	Benzol	0.0
Calcium Carbide	16.1	Crude Coal Tar	0.0
Rubber and Asbestos Products	14.5	Brown Coal Tar and Light Oils	0.0
		Cellulose Fibers	0.0

a. Class 3 items have been excluded from this tabulation.

APPENDIX A

COMMODITY TITLES USED WITHIN THE TEXT

<u>Title</u>	<u>Plan Position Number</u>
Chemical Pumps, Compressors and Equipment	27 00 000
Chemical Installations	27 11 000
Pumps	27 12 000
Compressors	27 13 000
Installations for Cellulose and Synthetic	
Fiber Industry	36 00 000
Chemical Industry	60 00 000
Basic Chemicals	61 00 000
Sulfur	61 11 000
Carbon Disulfide	61 11 200
Sulfuric Acid	61 11 500
Sodium Sulfate	61 11 600
Calcined Soda	61 12 100
Caustic Soda	61 12 300
Nitric Acid	61 13 200
Calcium Carbide including Acetylene	61 14 120
Nitrogenous Fertilizers	61 18 100
Phosphorous Fertilizers	61 18 200
Inorganic Dyes and Pigments	61 18 300
Alumina	61 19 990
Caprolactam	61 23 200
Total Solvents	61 28 100
Plasticizers	61 28 200
Movie and Photo Film, excluding X-Ray	
and Technical Film	61 31 200
Soap	61 41 600
Paints and Finishes	61 43 000
Pharmaceuticals	62 00 000
Insulin	62 11 000
Penicillin	62 12 000
Salicylic Acid	62 34 000
Rubber and Asbestos Products	63 00 000
Synthetic Rubber	63 11 000
Vehicle Tires and Tubes	63 15 000
(In terms of sets consisting of one tire	
and one tube)	63 16 000
Oils and Tar Products	64 00 000
Benzol	64 15 000
Phenol, Crude	64 18 000
Phenol, Pure	64 19 000
Crude Coal Tar	64 31 000
Brown Coal Tar and Light Oils	64 35 000
Rayon	82 11 000
Cellulose Fibers	82 12-14 000
Synthetic Fibers including Perlon	82 15-17 000

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APPENDIX B

PRODUCTION PLAN TARGETS: FIVE YEAR PLAN 18/ AND THE ANNUAL PLANS 19/

Thousand Metric Tons

	1951	1952
Sulfur	54.7 a/ 54.7 b/	85.0 85.6
Carbon Disulfide	34.0 a/ 34.0 b/	40.0 N.A.
Sulfuric Acid	276.0 a/ 276.0 b/	278.0 316.2
Sodium Sulfate	166.5 a/ N.A. b/	250.0 241.9
Calcined Soda	147.0 a/ 147.6 b/	270.0 270.6
Caustic Soda	178.0 a/ 178.6 b/	205.0 202.9
Nitric Acid	213.7 a/ 213.0 b/	230.0 246.2
Calcium Carbide/Acetylene	666.0 a/ 666.0 b/	735.0 687.0
Nitrogenous Fertilizers c/	237.0 a/ 231.2 b/	255.0 253.2
Phosphorous Fertilizers	68.0 a/ 69.0 b/	84.5 75.0
Alumina	18.0 a/ N.A. b/	44.4 44.4
Caprolactam	1.45 a/ 1.45 b/	2.0 2.0
Photo and Movie Film (1,000 square meters)	8.16 a/ 8.16 b/	8.6 N.A.
Paints and Finishes	51.8 a/ 52.5 b/	57.3 63.0
Synthetic Rubber	48.2 a/ 48.2 b/	55.0 N.A.
Vehicle Tires and Tubes (1,000 sets, each consisting of one tire and one tube)	596.0 a/ 596.0 b/	730.0 N.A.

a. Five Year Plan figure.

b. Annual Plan figure.

c. The figures are not directly comparable.

APPENDIX C

METHODOLOGY

This paper considers the Chemicals section of the draft of the Five Year Plan dated 1 October 1951 to be substantially in agreement with the final chemical targets of the Plan, as approved in November 1951.

This conclusion is supported by the identification of the 1951 Plan targets with individual and aggregate targets reported by other sources as being included in the revised 1951 Annual Plan. 20/ In addition, many of the Plan targets for 1955 have been reported subsequently by other sources as being targets contained in the Five Year Plan. 21/ It seems unlikely that much revision could have been made in this October draft by the time of the formal adoption of the Plan on 1 November 1951. It is most likely that this draft was the one actually adopted.

The tables used in this paper have been designed to show, by means of bar charts, indexes, and rank-order listings, the interrelationships of the various titles of the Five Year Plan referring to chemicals.

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APPENDIX D

GAPS IN INTELLIGENCE

The gaps in intelligence about the Five Year Plan for the production and supply of chemicals are gaps of detail concerning various aspects of the Plan* and gaps in current information about the role of and the execution of the Plan. The information which is available seems adequate to survey the original intentions indicated in the Plan.

* Vagueness concerning reparations, government orders, inventories, and stockpiling has been noted previously.

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APPENDIX E

SOURCES AND EVALUATION OF SOURCES

1. Evaluation of Sources.

Of the sources used, the most important is the copy of the Five Year Plan contained in FDD Special Translation Number 31. This appears to be the major source of information about the original intentions of the Five Year Plan in terms of specific and detailed planning. (See Appendix C.) The consistency of both the information reported in the Plan on 1951 production goals and the information reported in the East German M 1 forms of 1951 is noteworthy. (See Appendix B.)

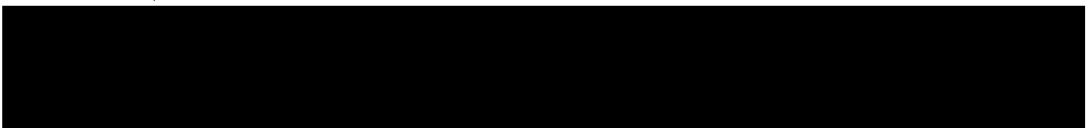
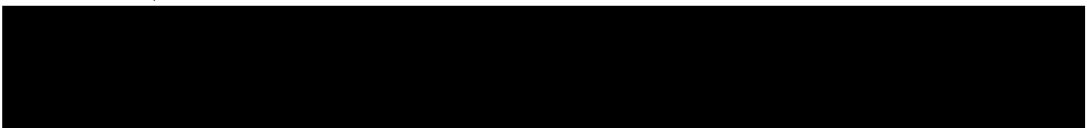
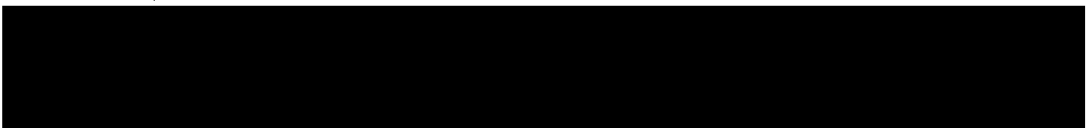
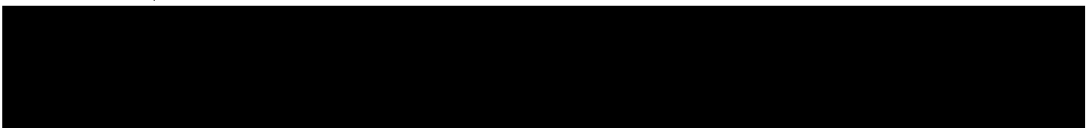
2. Sources.

Evaluations, following the classification entry and designated "Eval.," have the following significance:

<u>Source of Information</u>	<u>Information</u>
A - Completely reliable	1 - Confirmed by other sources
B - Usually reliable	2 - Probably true
C - Fairly reliable	3 - Possibly true
D - Not usually reliable	4 - Doubtful
E - Not reliable	5 - Probably false
F - Cannot be judged	6 - Cannot be judged

Evaluations not otherwise designated are those appearing on the cited document; those designated "RR" are by the author of this paper. No "RR" evaluation is given when the author agrees with the evaluation of the cited document.

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1. 
2. 
3. 
4. 
5. CIA, FDD Special Translation Number 31, 3 Aug 1953. S, US OFFICIALS ONLY.
6. Ibid.
7. Ibid.
8. Ibid.
9. Ibid.
10. Ibid.
11. Ibid.
12. Ibid.
13. Ibid.
14. Ibid.

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- 15. Ibid.
- 16. Ibid.
- 17. Ibid.
- 18. CIA, FDD Special Translation Number 31, op. cit.
- 19.

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